



September 9, 2004

Mr. Craig Hunt  
California Regional Water Quality Control Board  
North Coast Region  
5550 Skylane Boulevard, Suite A  
Santa Rosa, California 95403

Response to Comments  
Regional Water Quality Control Board's Letter Dated August 12, 2004  
Phase I and Phase II Environmental Site Assessments Reports  
Georgia Pacific Fort Bragg Sawmill Site  
90 West Redwood Avenue, Fort Bragg, California

Dear Mr. Hunt:

On behalf of Georgia Pacific Corporation (GP), TRC submits this response to the Regional Water Quality Control Board's (RWQCB) comment letter dated August 12, 2004.

Based on conversations during the July 8, 2004 meeting between Moira McEnespy of the California Coastal Conservancy, Linda Ruffing of the City of Fort Bragg, Julie Raming of GP, and Tuck Vath and Craig Hunt of the RWQCB, the RWQCB agreed to evaluate certain areas of the GP Fort Bragg Sawmill site to facilitate the acquisition of those areas for conversion to public lands. As defined by the Phase I and Phase II Reports, the areas of consideration for this phase of public land acquisition are the coastal areas of Parcel 1 and Parcel 3, a northwest section of Parcel 8, and all of Parcel 10.

GP conducted the Phase I and Phase II environmental site assessments on this project January 2003 through February 2004. For the above-referenced parcels, TRC installed 58 borings, 13 monitoring wells, and 60 potholes, and conducted analysis on 140 soil samples, 29 grab groundwater samples, and 13 monitoring well groundwater samples. The scope of the work for the Phase II activities was developed from the Phase I assessment findings and was performed to confirm or negate potential environmental impacts from previous site operations. Phase II activities were performed with the understanding that supplementary assessment may be required in one or more of the areas if soil and/or groundwater results indicated potential impacts.

In accordance with our ongoing communication with the RWQCB, and to facilitate the site review process, we have conducted an additional assessment in response to some of your comments on the Phase II Report.

We recognize that an additional assessment will be needed to address the remainder of the RWQCB's comments as well as comments from your review of the remaining parcels. We will provide you with a workplan to address those comments and initiate the assessment once the workplan has been approved.

Below please find your comments of August 12, 2004, and our responses.

General Comments:

1. *I have been in contact with some people identifying themselves as former employees of the site. I refer to those contacts in some of my comments. I may receive further relevant comments, from other former employees or other interested parties, in the near future. If I do, I will inform you.*

Response

GP and TRC are receptive to comments from the local community and previous employees regarding past environmental practices at the site. Please note that at one point GP employed up to 2,000 people at this plant, a large number of which are current residents of Fort Bragg. Based on the relatively few responses that were received by the RWQCB, we believe we have identified known potential environmental concerns at the facility and documented them in the Phase I report. With consideration of the additional information that has been provided, TRC on GP's behalf has performed environmental site assessments and will be performing additional assessments as needed.

2. *Copies of the chain-of-custody documents and the laboratory narratives were not included with the analytical reports submitted in the Phase II report. Please submit those documents.*

Response

Curtis and Tompkins provided all final laboratory reports to TRC in pdf and hard copy format. The Phase II Report that was submitted to the RWQCB contains the pdf data only. When we investigated, we discovered that copies of the chain of custody (COC) and laboratory narratives had not been provided by the laboratory in pdf format. Therefore, hard copies of all the laboratory reports (including COC and laboratory notes, and chromatograms) are provided with this response (Attachment A). In the future, we will ensure that all the pdf files provided to the RWQCB include COCs, laboratory notes, and chromatograms.

3. *The photocopies of the aerial photographs in Appendix C of the Phase I report are difficult to read. Please submit higher-resolution, higher-quality copies of the aerial photographs.*

Response

Higher-resolution copies of all aerial photographs are enclosed (Attachment B). However, due to the age and condition of some of the aerial photographs used in the Phase I report, it may not be possible to provide higher-resolution copies than those already available.

4. *In the future, when a total extractable petroleum hydrocarbon analysis (i.e., TPH-d and TPH-mo) is run on samples from this site and a detection is flagged by the laboratory that the detection does not match the standard or that heavier or lighter hydrocarbons contributed to the detection, please submit the chromatogram for that analysis and relevant standards and have the laboratory comment further on what the detection may be. Also, please inquire with your laboratory if such further information is available for the detections reported in the Phase II report.*

Response

Those chromatograms are available and are included as indicated in response to Comment 2 (Attachment A). Also, please note that the presence of heavier or lighter hydrocarbons, or hydrocarbons not matching the standard, may be due to several site characteristics. The detected compound may be either naturally-occurring or organic material not related to petroleum hydrocarbons. To account for such conditions, TRC has directed the laboratory to utilize a California-certified methodology to screen out naturally-occurring chemicals. This method, silica gel cleanup, was proposed in the past to the RWQCB in the Workplan for Additional Site Assessment dated June 23, 2003, and approved by the RWQCB in a letter dated July 15, 2004.

5. *The groundwater in the areas under consideration for these comments is potentially downgradient of other impacted or potentially impacted areas of the site. An assessment needs to be made of this potential route of contamination.*

Response

Initial placement of the wells at the site was intended to provide an area-wide understanding of the groundwater gradient. TRC has collected two quarters of groundwater gradient data. These data will be used to place additional wells strategically in select areas of the site that may require additional groundwater assessment. Specific areas are discussed below.

Based on grab groundwater data from Parcel 1, groundwater impacts are limited to the former pumphouse area.

For coastal areas of Parcel 3, groundwater data are not available. However, for Parcel 3, groundwater has a southwestern gradient. Wells directly upgradient

that were placed in the former Planer area were generally non-detect, with TPH-D at 150 µg/L in MW-3.9.

Parcel 8 is downgradient of Parcel 7 and Parcel 9. Most of the grab groundwater samples were non-detect for TPH-D with the exception of P7-4 which had 150 µg/L. Subsequently, monitoring well MW-7.1 was installed in this same location and the results of the recent analysis of this well were non-detect.

For Parcel 10, the groundwater gradient is indicated to be in the southwest direction. Four groundwater monitoring wells have been installed and are being monitored on a quarterly basis to evaluate impacts from the overlying fill. A recent round of groundwater monitoring was performed in the four wells in this parcel to address the RWQCBs comments. Results are discussed under specific comments and enclosed in Attachment F.

To create a better data set, the third and fourth quarter groundwater monitoring events of the existing wells will be expanded to include analysis for SVOCs, PAHs, PCBs, dissolved CAM-17 metals, pesticides, tannins, and lignin.

6. *Two contacts have stated that dumping of waste chemicals and fluids (e.g., hydraulic fluid and solvents) was commonplace until the 1990's.*

*In addition, the use and routine dumping of hydraulic oil/fluid at the site in general has been mentioned by multiple contacts. I understand that, in general, some hydraulic fluids contained PCBs. What types of hydraulic oil/fluid have been used at the site?*

#### Response

As noted in TRC's Phase I report, some minor spills of chemicals and fluids (hydraulic fluid, hydraulic oil, and solvents) potentially occurred at the Site during historical operations. These areas are documented in the Phase I report, and assessed in the Phase II. TRC collected and analyzed 59 soil samples and 10 grab groundwater samples for TPH-mo, 176 soil samples and 51 grab groundwater samples for VOCs, and 152 soil samples for PCBs at areas with the highest potential for impacts throughout the site.

In regards to use of hydraulic oils that may possibly contain PCBs at the site, GP has limited information regarding possible PCB contents in the hydraulic oil. Based on discussions with facility personnel, oils containing PCBs would likely have been in transformers and starters. Based on review of site data, mixture and discharge of hydraulic oils containing PCBs appears highly unlikely.

However, Phase II sampling data indicates numerous detects of hydraulic oil in the subsurface soils. Of these, 12 samples were tested for PCBs. Results indicate that none of these samples indicated the presence of PCBs. In addition, during

the Phase II activities 152 soil samples were tested for PCBs. These samples were collected from the areas identified as having the potential for the greatest impact. PCBs were detected in only three samples, with the highest at 0.14 mg/kg. If the PCBs were a common part of hydraulic oils at this facility, or PCB oils were mis-managed across the site, a higher frequency of detection would likely have been observed.

7. *A concern has been raised that dioxins may have been generated by the possible burning in the powerhouse of various wastes, including but not limited to PCB spill cleanup material. This concern extends to the open burning done in Parcel 10. Dioxin testing has not been done as a regular part of the testing at this site. However, there was concern previously regarding the possibility of dioxins being present in the ash from the powerhouse being used as a soil amendment under permit from this office. Some dioxin testing was performed in the late 1980's/early 1990's as part of the permitted soil amendment projects. Some polychlorinated dibenzodioxins and dibenzofurans were detected but were at low enough concentrations that the soil amendment projects were allowed to continue. The possible presence of dioxins on site due to on-site activities should be addressed.*

#### Response

Exponent, an engineering and scientific consulting firm with expertise in dioxin analysis and assessment, was contracted by GP to evaluate the potential for dioxin presence on site and to provide recommendations. A report by Exponent is enclosed with this response as Attachment C.

8. *One contact stated that the underground fire grid piping, except where it has been patched with plastic, is made of "Transite", an asbestos-containing concrete. The contact stated that the fire grid extends as far north as the air yard and as far south as the nursery. The pipes range in diameter from 6 inches to 16 inches.*

#### Response

Comment noted. It is our understanding that Transite piping does not pose a threat to soil and groundwater quality. Future property owners of the Site will be notified of the potential presence of Transite piping.

9. *This office was informed in early 1983 of a complaint made to the county that a wood preservative called "Permatox 180" (also referred to as "Chapman P-180") was being used at the site. Regional Water Board staff wrote in a January 7, 1983 memo, "The informant apparently stated that he was instructed on occasion to apply with hand sprayer a 100:1 solution of Chapman P-180 to stacked lumber... [in the] paved loading yard (near main boiler)." It was also alleged that the chemical was stored at the green chain. A product information sheet in our file indicates that Permatox 180 contained tetrachlorophenol and*

*glycol ether. Two contacts that I have spoken with had heard of pentachlorophenol or tetrachlorophenol use at the site but indicated that they had not heard it to be a permanent operation. One heard that the wood treatment chemical use had taken place in a building and another heard that it took place around the loading yard and/or the air yard; neither contact had direct dealings with or knowledge of wood treatment chemicals at the site. Our files contain a copy of an April 11, 1994 G-P letter to the state Department of Toxic Substances Control, apparently in response to an inquiry regarding possible pentachlorophenol use at the site. It was stated in the letter that:*

- “(1) such material was used for a short period (approx 20 months);*
- (2) it was hand applied (small amounts);*
- (3) all applications were over paved areas;*
- (4) only special export products comprising well less than 1 percent of our total production were treated.”*

### Response

Paul Johnson, an employee at the mill for 42 years, recalls the application of this surface treatment for mold and mildew in the Sawmill #1 green chain area. It was applied to 2-inch and 4-inch thick pieces of #2 Clear & Better Douglas Fir and rough lumber that was exported overseas to Germany, Australia, and New Zealand. Johnson and fellow employee Jim Pasetti, were the two individuals responsible for certifying the lumber before it was shipped. Johnson stated that the Chapman 180 was applied by an employee with a portable spray unit in a 100:1 solution directly onto the layers of lumber which were being pulled into units on the green chain. This lumber was then stacked and stored on a paved surface in the north shipping yard prior to final sorting and shipment. This practice was believed to have occurred during a one to two year timeframe between 1979 and 1985. Generally, the mill stored no more than 55 gallons of the chemical, probably in the area of the Resorter construction shop.

As stated above, Chapman P-180 was applied by a hand sprayer in a 100:1 solution to wood located on a paved area. It is unlikely that it would have an impact to subsurface soils and groundwater.

In addition, based on a review of historical activities conducted at the site, TRC identified an area in Parcel 3, near the northwest corner of Dry Shed No.4, where a dip tank was located and wood treatment took place. During Phase II activities, two soil borings were advanced in the area. Two soil samples and one grab groundwater sample were collected and analyzed for SVOCs (specifically pentachlorophenol). SVOCs were not detected at or above laboratory detection limits in the samples.

As discussed in the Phase II Report, SVOC analyses were conducted on 117 soil samples, 25 grab groundwater samples, and four monitoring well groundwater



samples collected at locations throughout the site. In particular, of the 140 soil samples collected in the parcels under study, 48 were analyzed for SVOCs and 97 were analyzed for VOCs. Low levels of SVOCs, slightly above laboratory detection limits, were detected near the Machine Shop in Parcel 3.

SVOCs were detected in one grab groundwater sample collected from the Mobile Equipment Shop area. However, SVOCs have not been detected in groundwater samples collected from monitoring wells in the area.

10. *Multiple contacts have mentioned the 1989 PCB oil spill from a transformer near the hog:*

- One contact stated that the sawdust used to soak up the spill was burned in the burner. That contact also stated that the spill went out a door on the west side of the hog building and reached the concrete pad outside the building; the impacted area was then rocked and black-topped over.*
- Another contact that stated he worked at the mill when the spill occurred said that part of his job was doing cleanup around the quad mill. The contact said that he was told to take the material used to soak up that spill out to the area past the runway, south of Johnson Rock. He said that he did bury the material out there and that he took note of the location. He is willing to come out to the site with me to try to more precisely locate that spot. I have been in touch with you to schedule a time when we can visit the site.*
- There are items regarding this spill in our files for the site. Regional Water Board staff was informed of the spill but were not involved in the immediate spill response. In a memo, Regional Water Board staff reported inspecting the area after the cleanup had been completed and stated that, due to the concrete floor and a berm around the building, the spill did not appear to have been a threat to water quality. Regional Water Board staff was told that the spill cleanup was performed by a company called ENSCO and that manifests of the proper disposal of the materials was available.*
- Our files also contain a copy of a May 16, 1989 letter from G-P to the city of Fort Bragg regarding the potential for dioxin generation from the boiler. It was stated that the PCB spill materials did not go into the boiler.*

Response

Based on our review of the above information, the PCB spill involved no more than a few gallons over a concrete/paved area. The sawdust used to clean up the spill at most would have consisted of a cubic yard. RWQCB records show that at the time of the inquiry, GP indicated that the spill cleanup was performed by ENSCO, a waste handling company. It therefore seems highly unlikely that the

material would have been placed in the burner. RWQCB staff did not indicate any additional concerns at the time regarding the spill or the cleanup.

To address concerns of the other former employee, TRC and RWQCB staff met with the employee on August 17, 2004. He recalled placing the material south of Johnson Rock past the runway. The employee indicated that he did not bury the material, but placed a sawhorse as a marker over the stockpile. He also indicated that he was not sure if the material contained PCBs. During the interview, an excavator was provided. Five exploratory potholes two feet wide by five to 15 feet long were installed in the area of the suspected disposal area. Native soil/bedrock was encountered three to five feet into the excavation in each of the trenches. No visual evidence of impacted soil was observed.

In addition, to address specific comments regarding the presence of "black holes" (as outlined in General Comment 12) this area has been assessed via a geophysical survey. Results of the geophysical survey indicate the presence of subsurface metal anomalies northwest of the area that was excavated (Attachment D). The anomalies will be investigated as part of future site assessment activities.

11. *Three contacts have discussed the disposal of various wastes at the southern end of the site:*
- *One contact, who stated that he had worked at the site, said that part of his job was an open burn operation many years ago in the Noyo Point area, where July 4th fireworks are launched from. He stated that in addition to the sawdust that was burned, old oil and transformer contents had been burned. He stated that the remaining material after a burn was covered over and that he put rock on top (he said that the area was also a rock dump). The burn operation would continue on top of that. He said that the burn was a regular operation and that the burn wastes would now be deep.*

#### Response

This area was identified after completion of the Phase I report, and will be assessed as part of supplementary Phase II activities.

12. *The North Coast Action group solicited information from former mill workers and has provided me with additional information and concerns regarding the site. Regarding the areas under consideration with this comment letter, they have heard of multiple locations where various wastes were deposited, which were referred to as "black holes". Two locations were specified: one near the coast in Parcel 3 and one in Parcel 10. I have already transmitted to you a map with the approximate locations marked. I did observe the additional potholing you had performed near the coast in Parcel 3 and I understand you will soon have geophysical surveys conducted of the two locations.*



### Response

A geophysical survey of these areas was conducted on August 17, 2004, with the oversight of the RWQCB. Approximately 4.3 acres in Parcel 3 and 6.7 acres in Parcel 10 were surveyed. Results are enclosed as Attachment D and indicate presence of minor amounts of metal debris in the surface soil in Parcel 3. The geophysical data indicates that the subsurface soil has not been disturbed and is of uniform material. In Parcel 10, subsurface metal anomalies were detected in several areas. These areas will be investigated as a part of the subsequent assessment, for which TRC will be providing a workplan.

### Response to Comments: Parcel 1

1. *No history for Glass Beach No. 2 and Glass Beach No. 3 were included in the Phase I. My understanding is that the Glass Beach No. 2 area was the Fort Bragg dump before the ocean dump operation was moved to the west end of Elm Street around 1949. I understand that Glass Beach No. 3 was also some type of dump site.*

### Response

Glass Beaches No. 2 and No. 3 were identified during the site visit. According to TRC's *Archaeological Survey of the Georgia Pacific Lumber Mill*, available at the City of Ft. Bragg document repository for public review, Glass Beach No. 2 is the location of an old city dump. The dump road ran from West Fir Street to the coast and marked the northern property boundary of the Union Lumber Company. During the mid-20<sup>th</sup> century, the Union Lumber Company extended their operations northward to Pudding Creek, and the city dump was moved.

Glass Beach area No. 3 contains historic trash, but the origins are unclear.

2. *From my inspections, it appears that there are some wastes on the slopes above the beaches, particularly in the Glass Beach No. 1 area. The wastes present on Georgia-Pacific property in these areas should be removed.*

### Response

Visible waste above the high tide line will be removed in the same manner as the initial Glass Beach cleanup.

3. *The Phase II report text did not mention that various debris was noted in the upper four feet of boring PI-3 in the Glass Beach No. 1 area, as recorded in the boring log.*

#### Response

As noted in the boring log, only trace or very minor amounts of porcelain/glass and metal debris were observed in the upper four feet of boring P1-3. Analytical data from P1-3 samples at one and five feet indicate non-detect to low levels of TPH-D, metals and non-detect levels for VOCs and SVOCs. Results indicate that the observed porcelain/glass and metals debris have not impacted the soil.

4. *Although it was stated in the Phase II report that potholing in the Glass Beach No. 3 area was performed in response to anomalies detected with the geophysical survey of the area, specific connections between the potholes and the anomalies were not made in the Phase II report. It would be helpful to have more detail about these connections. This could be done, perhaps, with an overlay figure.*

#### Response

The enclosed figure (Attachment G) shows the location of the geophysical survey and the potholes.

5. *The groundwater sample from boring P1-16, at the pump house in Parcel 1, had 190 µg/LTPH-diesel. The soil samples had 11 and 12 mg/kg TPH-d. Each of these detections was flagged by the laboratory with the following notes: "Heavier hydrocarbons contributed to the quantitation" and "Sample exhibits chromatographic pattern which does not resemble standard". The following description was contained in the boring log for this boring: "@ 2-6': black hydrocarbon staining, mild hydrocarbon odor. The Phase II recommendation for this area was to investigate groundwater in the area with a monitoring well at the helicopter landing pad. The monitoring well installed in that area is approximately 300 ft south-southeast of the pump house. The groundwater gradient data collected indicates that this monitoring well is not downgradient of the pump house. I also consider the distance between the pump house and the monitoring well to be too great to use it to draw conclusions about the pump house area. The contamination in the pump house area should be further investigated. The target analytes for further assessment should include the full range of the TPH-extractable analysis and polynuclear aromatic hydrocarbons (PAHs).*

#### Response

Due to lack of historical groundwater gradient information at the site, monitoring wells were initially installed to properly identify groundwater gradient in the general area and to allow for future strategic placement of additional groundwater monitoring wells, if necessary. TRC proposes to install one additional groundwater monitoring well in the vicinity of P1-16. Soil and groundwater samples will be collected and analyzed for the full range of TPH-extractables and PAHs.

6. *It was stated in the Phase II report that the groundwater samples collected from Parcel 1 were not impacted with TPH-mo. However, the groundwater samples from Parcel 1 were not analyzed for TPH-mo.*

Response

This is a typographical error, found only in the Groundwater Discussion, Section 5.1.5. Discussions of groundwater results for each area of interest in Parcel 1 are correct.

7. *It is possible that other wastes or contamination may be found when the paving in Parcel 1 is removed.*

Response

Based on review of historical data, the area was only used as a storage area for lumber. Therefore, while the possibility of wastes or contamination may exist, it would appear to be unlikely.

Response to Comments: Coastal Area of Parcel 3

1. *This section of Parcel 3 contained what was described in the reports as a scrap yard. Three borings were completed in that area: P3-1, P3-2, and P3-3. From the boring logs, these borings were completed at a depth of 3 ft and bedrock was not encountered. Soil samples at 0.5 ft were collected from each boring and analyzed for TPH-g, TPH-d, VOCs, metals, and PCBs. From the boring logs, it appears that soil samples were also collected at 2.5 ft; however, no analytical results were reported for those samples.*

Response

Based on assessment of historical operations at the site, it was determined that the area identified as the scrap yard was primarily utilized for lumber and scrap metal storage. Samples were collected at 0.5 feet and 2.5 feet. The surface samples were analyzed as described above, while the deeper samples were placed on hold in the laboratory pending receipt of analytical data for the surface samples. The deeper samples were mistakenly never analyzed. Subsequent potholing was performed during our additional assessment and a deeper sample was taken. The results of this sample will be in the report of the additional assessment. To address RWQCB's recent concern regarding detection of PCB in this area, a deeper soil sample will be collected and analyzed for PCBs and extractable petroleum hydrocarbons as well.

2. *It was stated in the Phase II report that this area had "a thin layer of soil underlain by bedrock...". However, neither refusal nor bedrock was reported in the logs for the three borings in that area.*

### Response

The main purpose of the assessment conducted in the Scrap Yard area of Parcel 3 was to determine if debris-related contaminants were present in shallow soils. As discussed in the Phase II report, during the assessment of Glass Beach No. 3, which is in the proximity (northwest) of this area, bedrock was observed either at surface or a few feet from the surface. During review of soil data collected during Phase II activities, it was incorrectly assumed that the soils in this area resemble Glass Beach No. 3. Although the boring logs correctly depict the field conditions encountered at the borings constructed in the Scrap Yard, the text was never amended.

3. *TPH-d was detected in each of the three soil samples from 39 to 490 mg/kg. Each of these detections was flagged by the laboratory with the following notes: "Heavier hydrocarbons contributed to the quantitation" and "Sample exhibits chromatographic pattern which does not resemble standard". PCBs were detected in soil sample P3-3 at 0.14 mg/kg. Some of the detected metal concentrations in the three samples appear to be possibly above background concentrations. The extent of the contamination in this area needs to be further assessed. The target analytes for further assessment should include the full range of the TPH-extractable analysis, PAHs, PCBs, and metals.*

### Response

On August 17, 2004, 3-D Geophysics conducted a geophysical assessment of this area. Results are included in Attachment D. Based on the results of the assessment, TRC will determine locations for additional potholing. In addition, soil samples will be collected at depths ranging from two to six feet below ground surface (bgs) and analyzed for the full range of TPH-extractables, PAHs, PCBs and metals. In regards to laboratory notes for TPH-D, it is standard practice for the laboratory to provide notes on analysis with chromatograms that do not match the exact standard available to them. In this case, it is likely that the chromatogram is different because the impacts are from either organic, non-fuel related sources, and/or weathered petroleum hydrocarbons. Additional analysis of the soils in this area will be conducted using the silica gel cleanup standard to ensure there is no interference from the naturally occurring organic materials.

### **Response to Comments: Parcel 8**

1. *The residential area in the southeast corner of the site is shown as part of Parcel 8 in some of the figures. However, the residential area was largely unaddressed in the reports. The residential area is not part of the scope of this comment letter.*

### Response

Comment noted. This portion of the property is not considered a part of the mill operations.

2. *The Phase I recommendations for Parcel 8 included analyzing soil samples for TPH-mo as well as TPH-d. TPH-mo analysis was not run on these samples.*

Response

Comment noted. TPH-mo analysis will be added to the next phase of assessment conducted in Parcel 8.

3. *From the boring and pothole logs, it appears that 17 samples were collected from one boring and nine potholes. However, nine analyses from the one boring and eight of the potholes were reported in the analytical results and laboratory reports.*

Response

All soil samples collected in the field were submitted to the laboratory. Two to three soil samples were collected from each boring location and submitted to the laboratory, with a hold placed on the deeper samples. If constituents of concern were detected in the shallow sample or if an odor or soil color anomaly were detected in the field, the analyses were performed on the samples collected at greater depths.

Pothole soil sampling locations were determined based on field observations. Field geologists were instructed to note the presence of fill material at each pothole location. If fill material was not noted, the pothole was to be terminated. If fill material was noted, a sample was to be collected from native soil, where possible based on equipment reach, or at groundwater interface, whichever was encountered first. However, several soil samples were collected from within the fill material. The samples were submitted and placed on hold at laboratory.

4. *The rationale for which soils were sampled from the potholes and which samples were analyzed was not given in the Phase II report.*

Response

See Response to Comment #3.

5. *The rationale for the final depths of the potholes was not given. Bedrock was not noted in any of the pothole logs for this area. It does not appear that the bottom of the fill material was reached in pothole P8-T2.*

Response

As previously stated in Comment #3, all potholes were to be completed to native soil if possible based on reach of equipment. However, in July 2004, an additional pothole (P8-PH6) was advanced in the vicinity of Pothole P8-T2 and the depth of fill material was noted continuing to 16 fbg by both TRC and the

RWQCB. This pothole did not reach native soils. Soil samples were collected at two and 16 fbg and analyzed for TPH-D and TPH-mo by the toxicity cleanup leaching procedure (TCLP). Both analyses were performed using the silica gel cleanup method.

Low levels of TPH-D and TPH-D by TCLP were detected soil samples P8-PH6 @ 2 (4.8 mg/kg and 79 µg/l, respectively) and P8-PH6 @ 16 fbg (11 mg/kg and 60 µg/l, respectively). Low levels of TPH-mo were detected in P8-PH6 @ 2 fbg (21 mg/kg) and P8-PH6 @ 16 fbg (21 mg/kg). TPH-mo by TCLP was not detected at or above laboratory detection limits. Results indicate that while low levels of petroleum hydrocarbons are present in this area, they do not appear to be a potential impact to the groundwater.

6. *The analytical results table and laboratory report show the sample from pothole P8-PH6 as coming from a depth of 1 ft. However, the log for that pothole shows the only sample coming from a depth of 4.5 ft. Similarly, the results for P8-T3 report a sample depth of 2 ft while the log shows a sample depth of 5 ft.*

Response

An error occurred during the transfer of draft field pothole logs to the final pothole logs contained in the Phase II Report. In each of the pothole locations referenced above, soil samples were collected from the shallow and deeper sample locations indicated by the laboratory reports and the pothole logs. Both samples were submitted to the laboratory, with a hold placed on the deeper sample. Refer to Response #3 for sampling rationale. We will refine our quality control procedures to eliminate such errors in the future.

7. *Not all the laboratory reports for the reported results for this area appear to be in the Phase II report.*

Response

Hard copies of all laboratory reports are provided with this Response to Comments letter. The omitted TPH-D results for Parcel 8 pothole sampling locations are contained in the Curtis and Tompkins Lab Job #164381 Report.

8. *The highest concentration of TPH-d was in the sample from P8-T2. From the logs, that pothole contained waste materials. The extent of this waste material and contamination should be investigated. Analysis for PAHs should be included with this assessment. The P8-T2 sample also had the highest concentrations of barium, copper, and zinc in the Parcel 8 samples.*

*The Phase I report contained a recommendation to perform a geophysical survey in the area labeled "Disturbance Along Coastal Areas (Near Cemetery)" to evaluate the potential presence of buried railroad lines. That recommendation*



*was not carried over to the Phase II report and the geophysical survey was not performed. A geophysical survey in this area could also help determine the extent of the waste materials found in pothole P8-T2.*

Response

Additional assessment of the P8-T2 area was performed in July 2004. These results are summarized in Response to Comment #5. Due to the limited size of the area, a geophysical survey was not conducted. Instead, potholing was used to determine the aerial extent and nature of the fill material present.

9. *The Clinker Piles area was investigated with a single pothole that appears adjacent to the piles in the figures. Neither the clinker piles nor the soil immediately under the piles was investigated. I recommend further investigation in this area, with the addition of PAHs to the list of target analytes.*

Response

A sample from the clinker material was collected during the August 17 site assessment event. In addition, GP conducted analysis of the clinker material including SVOCs, PAHs, and CAM 17 metals during a separate assessment. Both data sets are enclosed as Attachment E.

10. *The extended use of various heavy equipment and thus the long-term potential of leaking petroleum products and hydraulic oil in this area should be addressed.*

Response

The workplan will provide a sampling and analysis plan to assess potential impacts from hydraulic oil in this area.

Response to Comments: Parcel 10

1. *The materials that I have been told were burned in this area included wood wastes, waste oils, and transformer contents. The materials that I have been told were deposited in this area included wood wastes, hydraulic oils, PCB spill cleanup material, boiler ash, and alum pond dredgings.*

Response

Soil samples were collected at various locations in Parcel 10, at depths ranging from 2 to 10 fbg in areas containing fill material, fill material with ash and woody debris, and native soil. PCBs and VOCs were not detected at or above laboratory detection limits in any of the samples in Parcel 10. With the exception of P10-PH26 where phenanthrene was detected at 0.40 mg/kg, just above the detection limit of 0.34 mg/kg, SVOCs were not detected in any of the other soil samples.

No visual evidence of impacts from hydraulic oils and PCBs was observed. RWQCB concerns regarding the alleged PCB spill was addressed in response to the General Comment No. 10. It is our understanding the alleged PCB spill cleanup material consisted of a few yards of soil.

Additional soil samples were collected during the monitoring well installation activities. Analysis results indicated TPH-MO concentrations ranging from 39 mg/kg to 360 mg/kg. Groundwater data from the August 2004 sampling event (Attachment F) indicate no impacts to groundwater from TPH-mo or TPH-D, SVOCs, and PCBs. Also no VOCs were detected except benzene at a concentration of 3.3 µg/L in MW-10.2.

2. *It was recommended in the Phase I report that this area should be investigated for TPH-mo. TPH-mo analysis was not reported for the 2003 potholes. TPH-mo analysis was reported for the Parcel 10 monitoring well samples.*

Response

Comment noted. However, as stated above, soil samples collected during monitoring well installation activities were analyzed for TPH-mo. In addition, TPH-mo analyses were also conducted on groundwater samples collected during the August 2004 sampling event for Parcel 10. (Attachment F). Results indicate no impacts to groundwater from TPH-mo.

3. *The SVOC analytical results for sample P10-PH26-2' in the Phase II report tables did not match the results in the analytical reports. In the analytical reports, the following PAHs were detected: naphthalene at 1.1 mg/kg; acenaphthylene at 0.34 mg/kg; phenanthrene at 0.40 mg/kg; fluoranthene at 0.38 mg/kg; and pyrene at 0.34 mg/kg. From the laboratory report, this sample was analyzed a second time with detections for the same compounds: naphthalene at 1.3 mg/kg; acenaphthylene at 0.53 mg/kg; phenanthrene at 0.84 mg/kg; fluoranthene at 0.95 mg/kg; and pyrene at 0.84 mg/kg.*

Response

Comment noted. The omission of the PAHs in the report table was an error. Future data input will undergo additional quality control to prevent similar errors in the future.

4. *In the 2003 potholing work done in Parcel 10, it appears from the logs that 36 samples were collected from 28 potholes. However, there are analytical results and analytical reports for 14 samples from 14 potholes.*

Response

The main purpose of the assessment conducted in Parcel 10 was to determine the nature, areal extent, and, where possible, the depth of the fill material. Soil samples were collected from all pothole locations and submitted to the laboratory. Sample selection was done after study of the pothole logs to provide a sampling of various materials encountered during the assessment (fill, ash, and bricks). Laboratory analyses were performed on soil samples collected from potholes in which visual evidence of staining or strong odors was observed. In addition, analyses were conducted on randomly selected soil samples collected from within fill material containing ash and from within the native soils below the fill material.

Data obtained during installation of groundwater monitoring wells provided additional information regarding the depth and nature of fill material as well.

5. *The rationale for what soils were sampled from the potholes and which samples were analyzed was not given in the Phase II report.*

Response

Please note response to Comment #4.

6. *The rationale for the final depths of the potholes was not given. Since bedrock was noted at the bottom of some of the holes in the pothole logs, it appears that bedrock was not encountered in the others. It also does not appear that the bottom of the fill material was reached in every pothole.*

Response

As stated in Response #4, the purpose of the Parcel 10 assessment was to determine the areal extent of the fill material, and where possible the depth of the fill material. Some potholes were terminated before encountering native soils due to the limitations of the equipment. Data obtained during monitoring well installation indicates that fill material is up to 16 fbg at some locations.

7. *I do not necessarily concur with the conclusion in the Phase II report that the "concentrations of metals in the pothole soil samples from the Fill Material Area are representative of those found in the greater area." There appears to be a correlation between the typical concentrations of a few of the metals (particularly barium, copper, zinc, and to a lesser degree lead) and the presence or absence of ash in the soil from which the samples were taken, according to the boring logs. The higher concentrations appear to correlate with the presence of ash.*

Response

GP acknowledges that some metals may be present in slightly elevated concentrations due to the presence of ash. However, the majority of the concentrations of metals appear to be consistent with the findings identified with in this region in the U.S. Geological Survey Professional Paper 1648 (2001), "Geochemical Landscapes of the Conterminous United States – New Map Presentations for 22 Elements". Additionally, these concentrations are below the conservative EPA Region 9 Preliminary Remediation Goals (PRGs) which are often used as a screening measure of site cleanup. Also, TRC has conducted additional testing of the groundwater in this area for dissolved metals in monitoring wells MW-10.1, 10.2, and 10.4. Results are included in Attachment F.

8. *I do not concur with the recommendation that no further action be required in the Clinker and Ash/Scrap Pile Area. Two samples were collected from the pothole in that area: one from the ash 0.5 ft below ground surface and one at 4 ft from the silt with sand with no ash noted. No analyses were reported for the sample from the ash.*

Response

Additional samples were collected during the August 17, 2004 assessment. Also, GP has profiled clinkers and ash previously sampled in 2002. Data from these analyses are enclosed in Attachment E.

9. *The potholes in the Fill Material Area appear to have mostly been done near the dirt roads around the area. Is the nature of the fill material in the raised area between the eastern and western dirt roads the same as the fill material that was tested?*

Response

As stated above, one of the objectives of the assessment was to delineate the extent of the fill material in Parcel 10. Potholes were completed within the raised area between the eastern and western dirt roads. The fill material observed and analyzed appears to be similar to fill materials found along the dirt roads.

10. *The analyses being run on the groundwater samples from the monitoring wells are not sufficient considering the wastes known or reported to have been deposited in this area. The analyses should include, at a minimum, TPH-extractable, dissolved metals, PCBs, PAHs (using an analytical method with lower reporting limits than EPA Method 8270 has; for example, EPA Method 8310), and tannins and lignin. I also recommend testing for the pesticides and herbicides used at the site.*



Response

On August 17, 2004, additional sampling was completed at monitoring wells located on Parcel 10. Samples were analyzed for TPH-extractable, dissolved metals, PCBs, PAHs (by EPA Method 8310), and pesticides. Analytical results are enclosed in Attachment F.

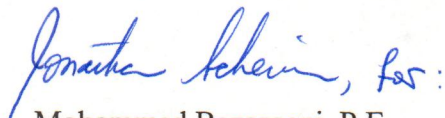
Concluding Remarks

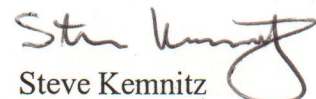
As indicated above, the site assessments for all of the remaining parcels performed during Phase II activities were intended to assess areas of impact identified in Phase I activities. The assessment methodology is outlined in Table 1 of the Phase II report. In this assessment process, several soil samples were collected from each boring/pothole. In general, samples from the shallow soils were initially analyzed first, and if necessary, based on data from the shallow soils, or observed field conditions, deeper samples were analyzed. During the potholing activities, attempts were made to identify impacts to native soil (if encountered). Soil samples were also collected to account for various types of fill materials including ash, wood debris, and soils adjacent to metals debris.

Groundwater monitoring was initiated at the site in 2004. The first and second round of groundwater monitoring consisted of sampling the wells for various chemicals detected either in the grab groundwater samples collected during phase II activities, or chemicals detected in the vadose zone. Results of the first and second quarter groundwater monitoring results are enclosed. Third and fourth quarter groundwater monitoring of the existing wells will be expanded to include analysis for SVOCs, PAHs, PCBs, dissolved CAM-17 metals, pesticides, tannins and lignin.

Please call if you have any questions or comments.

Sincerely,

  
Mohammad Bazargani, P.E.  
Associate

  
Steve Kemnitz  
Project Scientist

cc: Ms. Julie Raming, Georgia Pacific Corporation

Enclosures:

- Attachment A - Hard Copy of Laboratory Reports including Chain of Custodies, Chromatograms, and Laboratory Notes. (Enclosed Box)
- Attachment B – High Resolution Copies of Aerial Photographs
- Attachment C – Report of Dioxin Assessment – Exponent
- Attachment D – Results of Subsurface Geophysical Survey – 3D Geophysical
- Attachment E – Clinker Ash Data
- Attachment F – Second Quarter 2004 and August 2004- Parcel 10 Groundwater Sampling Data.
- Attachment G – Figure: Geophysical Anomalies Glass Beach No. 3



## References

- California Regional Water Quality Control Board, Letter, 2004. Site Assessment Comments for Portions of the Site, Georgia-Pacific Fort Bragg Sawmill, August 12.
- TRC, 2004. Phase I Environmental Site Assessment. Georgia-Pacific California Woods Products and Manufacturing Division, 90 West Redwood Avenue, Fort Bragg, California. March 2004.
- TRC, 2004. Phase II Environmental Site Assessment Report. Georgia-Pacific California Woods Products and Manufacturing Division, 90 West Redwood Avenue, Fort Bragg, California. May 2004.
- TRC, 2004. Archaeological Survey of the Georgia-Pacific Lumber Mill, Fort Bragg, California. 2004.
- Gustavsson, B., Bloviken, D.B. Smith, and R.C. Severson, 2001, Geochemical Landscapes of the Conterminous United States – New Map Presentations for 22 Elements: U.S. Geological Survey, Professional Paper 1648.